Hawaii Strategic Highway Safety Plan 2007 THRU 2012

Hawaii Strategic Highway Safety Plan

OUR VISION

All Hawaii's road users arrive safely at their destinations.

OUR MISSION

Reduce the number and severity of traffic-related injuries and deaths on Hawaii's roadways through the development of a Strategic Highway Safety Plan.

OUR GOAL

Working together, we will reduce the number of traffic-related deaths from an annual average of 135 to 100 or fewer within five years.

Foreword

A NATIONAL CONCERN

Highway safety is a national concern recognized by the federal government, all 50 states and countless local law enforcement agencies and community organizations across the United States. The immediate catalyst for the development of the Hawaii Strategic Highway Safety Plan was enactment of the federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. The Act, signed into law by President Bush in August 2005, requires each state to develop and implement a highway safety plan.

A STATEWIDE EFFORT

The Hawaii Department of Transportation spearheaded the development of this five-year Strategic Highway Safety Plan through a collaboration that involved traffic safety, public safety and public health experts from government and community agencies statewide. The content of this plan stems from work sessions of a broad group of stakeholders consisting of more than 150 representatives of local, state, federal and community organizations. A Core Committee was established to provide primary guidance and input, monitor progress, and complete the plan. The Hawaii Strategic Highway Safety Plan employs research conducted by the National Cooperative Highway Research Program and the American Association of State Highway and Transportation Officials. The latter developed a list of 22 emphasis areas related to roadway safety. Hawaii stakeholders used these areas as the starting point for development of this Strategic Highway Safety Plan. The process and the strategies that resulted are described in the pages that follow.

Governor's Message

Aloha,

There are far too many senseless injuries and deaths on Hawai'i's roadways. The tragic thing is most of these deaths and injuries could have been prevented.

From 2001 to 2006, there were 835 traffic-related fatalities in Hawai'i. That number does not include the thousands of those who were injured. Nor does that number include the family members and friends who lost a loved one.

Impaired driving, speeding and pedestrian fatalities continue to be major areas of concern for our state. To illustrate the magnitude of the problem, here are a few statistics from 2006:

- Driving under the influence of alcohol contributed to 79 fatalities.
- Excessive speed contributed to 77 fatalities.
- There were 32 pedestrian fatalities.

To address this and other major traffic safety issues, the Hawai'i Department of Transportation coordinated and oversaw the development of this Hawai'i's Strategic Highway Safety Plan.

The goal of the Strategic Highway Safety Plan is simple: save lives and reduce the severity and number of injuries on our roadways. We hope to reduce the number of traffic-related fatalities to 100 per year or less by 2012.

To assist us in this important task, we invited nearly 300 of the state's most passionate people involved in traffic safety and public health to join in the development of the plan.

We were both overwhelmed and excited by the outpouring of support and participation in the development of Hawai'i's Strategic Highway Safety Plan. Joining us in the effort were members of the private sector, community groups and state, federal and county agencies.

We encourage all of you to use the information when developing traffic safety plans in your neighborhoods and counties. It will take everyone's participation to fully realize the ideas proposed in the Strategic Highway Safety Plan. Together, we can make a difference and make Hawai'i's roadways a safer place for everyone.

Mahalo,

Linda Lingle
Governor

Table of Contents

Introduction and Overview

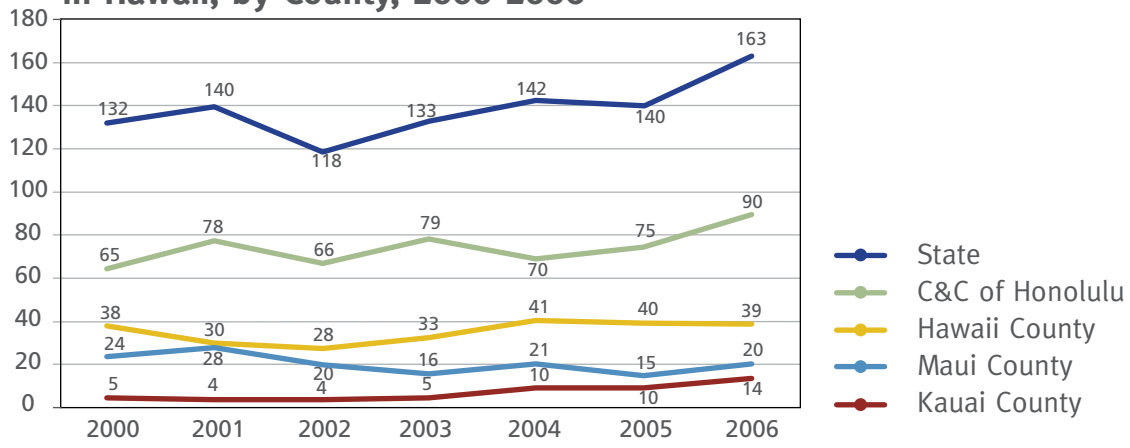
Traffic fatalities are the leading cause of injury death in Hawaii and the leading cause of death among teenagers. On average, one person dies on Hawaii's roads every three days. Every day, 28 people are injured in traffic crashes, 20 crash victims end up in an emergency room and four are hospitalized. The totals over five years, 2001-2005, are staggering: more than 670 dead, thousands injured, and tens of thousands of lives affected by the carnage on our roads.

There is increasing public awareness that accidents "don't just happen;" they are caused. All too often alcohol, drugs and excessive speed are causes or contributing factors in traffic crashes that claim scores of lives each year. Sadly Hawaii ranks second in the nation in the percentage of traffic fatalities that are alcohol-related. Speed remains the most common factor in traffic fatalities. Ironically, because Hawaii is blessed with near-perfect year-round weather, pedestrians, bicyclists, motorcycle and moped riders are too often casualties of motor vehicle crashes. Hawaii leads the nation in pedestrian fatalities involving senior-citizens and ranks second in the number of bicycle fatalities.

Hawaii's fatality rate of 1.46 per 100 million vehicle miles is about the same as the national average, yet as our Governor Linda Lingle has said, the toll of traffic-related deaths in our state at any level is simply not acceptable. Figure 1 shows traffic fatalities statewide and by county, from 2000-2006.

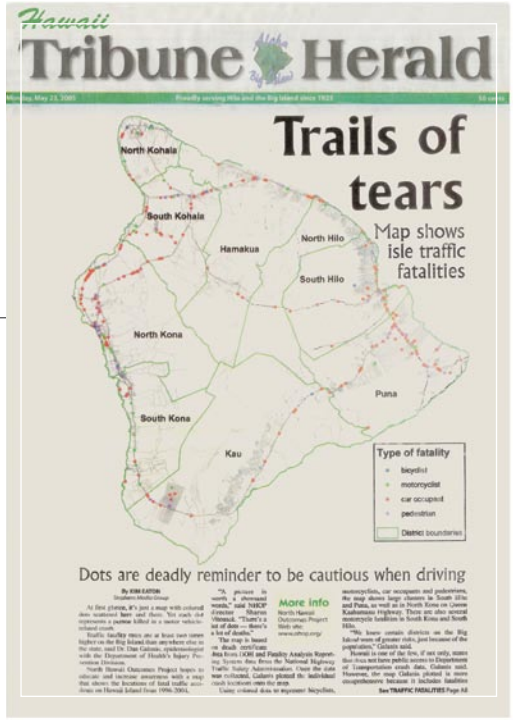
FIGURE 1

Annual Number of Traffic-Related Fatalities in Hawaii, by County, 2000-2006



Not everything that is faced can be changed, but nothing can be changed until it is faced.

— Jame Baldwin, American author


Hawaii Tribune Herald

Trails of tears

Map shows isle traffic fatalities

North Kohala
South Kohala
Hamakua
North Hilo
South Hilo
North Kona
Puna
South Kona
Kau

Type of fatality
bicyclist
motorcyclist
car occupant
pedestrian
District boundaries

Dots are deadly reminder to be cautious when driving

More info

As more drivers take to the road on Hawaii's limited highway system, it is more important than ever that the State of Hawaii map the future of highway safety and reverse the upward trend in highway deaths and injuries. A key to this effort will be greater traffic safety awareness, improved traffic-safety data collection, management and distribution, and continued improvements to our roadway systems.

To address these and other crucial traffic-safety issues, the Hawaii Department of Transportation spearheaded the development of a Strategic Highway Safety Plan. The stated goal of the plan is to reduce the number of traffic-related fatalities from an average of 135 a year (from 2001 to 2005) to 100 or fewer by 2012.

Hawaii stakeholders from various organizations and disciplines, including public safety, public health law enforcement, Judiciary, highway design, and data management, reviewed many sources of information during the six months of their study. For the purposes of this report, they referred principally to the 2004 Fatality Analysis Reporting System (FARS), which is the most consistent with the 22 Emphasis Areas identified by the American Association of State Highway and Transportation Officials (see Figure 2).

After much discussion and deliberation, the Core Committee of about 30 individuals consolidated the 22 AASTHO areas into seven emphasis areas that were particularly pertinent and pressing in Hawaii.

- Aggressive Driving
- Impaired Driving
- Occupant Protection
- Pedestrian and Bicyclists
- Motorcycle and Moped Safety
- Facility Design (Roadway and Intersection Operations)
- Data and Safety Management

At a Kick-off Summit in January 2007, more than 150 concerned and committed individuals from federal, state, county, and community agencies met in work groups to develop a list of prioritized strategies in each of the seven emphasis areas. Figure 3 provides an overview of the process. By June 2007, more than 100 strategies were recommended for inclusion. Each strategy is part of a multi-faceted solution envisioned by the stakeholders to improve traffic safety in Hawaii and to reduce the number of traffic fatalities and injuries.

The Honolulu Advertiser

HAWAI'I'S NEWSPAPER

HONOLULUADVERTISER.COM

Big Island roads are deadliest

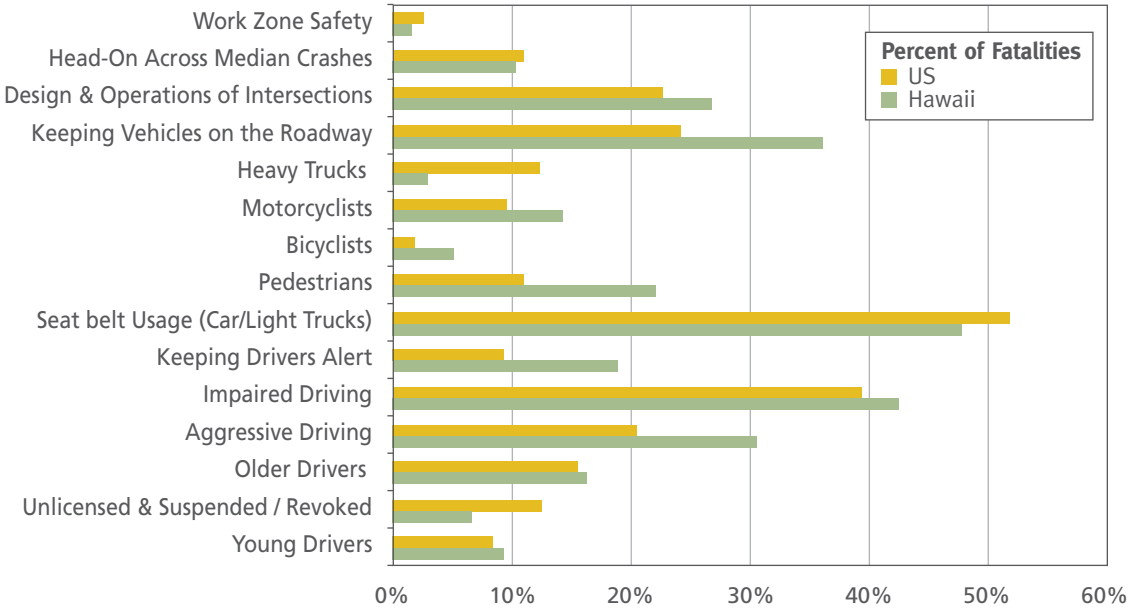
Traffic fatality rate two or three times the state average

BY MIKE LEIDEMANN

A SURVIVOR'S TALE

FIGURE 2

Hawaii vs. US Fatal Crash Statistics by Emphasis Area

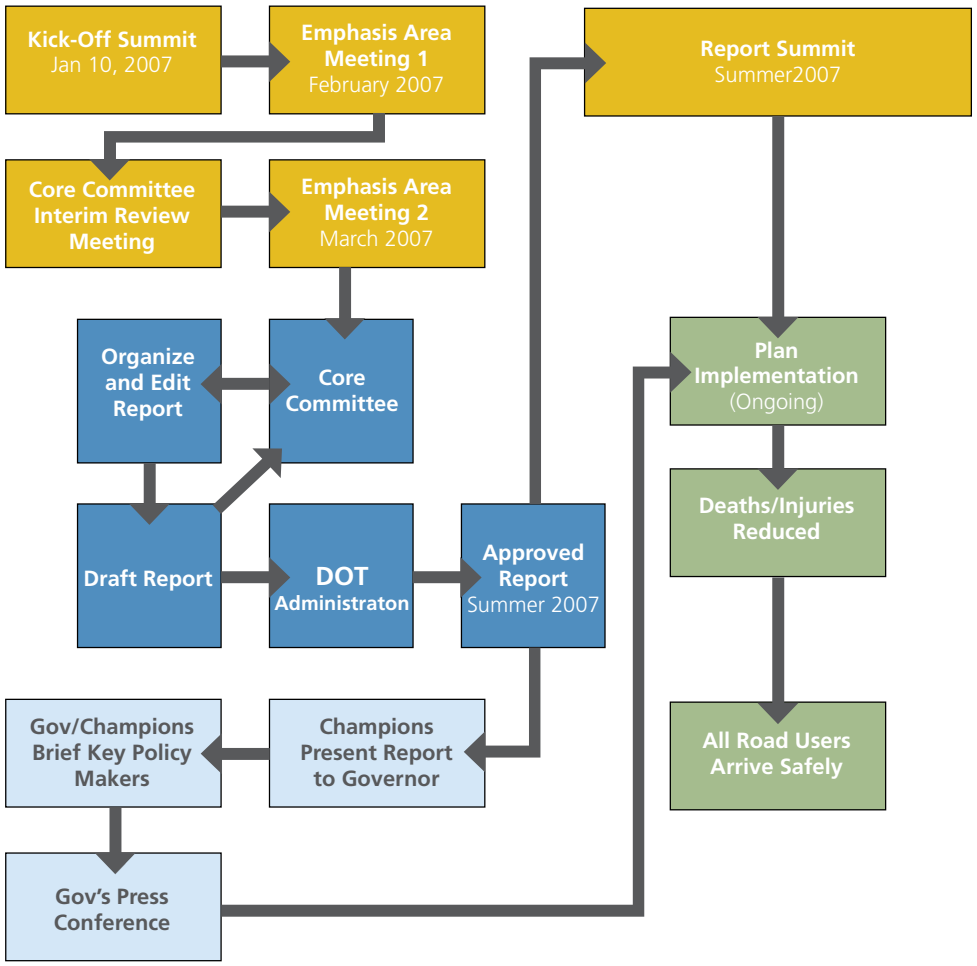


At a Kick-Off Summit in January 2007, more than 150 concerned and committed individuals from federal, state, county, and community agencies met in work groups to develop a list of prioritized strategies in each of the seven emphasis areas.

The strategies outlined in this plan will help decision-makers, engineers, planners, safety partners, and the public identify the important steps that must be taken and point to what they can do to realize the common goal of reducing traffic fatalities and injuries on Hawaii's roadways. The plan provides the framework for strategic and performance goals that address traffic safety, behavior and infrastructure on public roads.

FIGURE 3

Strategic Highway Safety Plan



PUTTING THE BRAKES ON AGGRESSIVE DRIVING

The Challenge:

Reduce speeding and other forms of aggressive driving on Hawaii's roads.

BACKGROUND

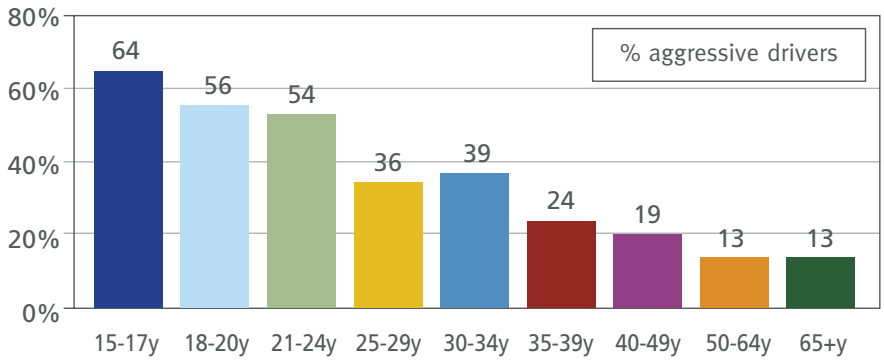
More than 60 percent of motorists across the country see unsafe driving as a serious threat to themselves and their families. According to national reports, aggressive driving threatens motorists, bicyclists, and pedestrians alike. The threats come from speeding, following too closely, changing lanes frequently without signaling, flashing lights, driving on shoulders to pass, driving across marked barriers, and angry shouting or gesturing at other drivers.

Aggressive drivers also tend to be high-risk drivers. They are more likely to ride unrestrained by seat belts and more likely to drink and drive.

Aggressive driving is a major contributor to traffic crashes in Hawaii. On average, from 2001 to 2005, aggressive driving contributed to 60 traffic fatalities in Hawaii each year. Nearly half (43 percent) of all fatal traffic crashes in Hawaii involved aggressive driving. Each year in Hawaii there were more than 1,700 major non-fatal crashes and injuries that involved aggressive driving, or nearly five crashes each day. Aggressive drivers involved in non-fatal crashes had a similar profile to those involved in fatal crashes: younger, male, less likely to use seat belts, and more likely to use alcohol or drugs.

FIGURE 4

Prevalence of Aggressive Driving among Drivers Involved in Fatal Crashes in Hawaii, by Age Group, 2001-2005.



In 2006, 67 fatal crashes in Hawaii involved speed as a factor, resulting in 77 of 144 total traffic fatalities, or 53 percent. Speed is the leading factor in Hawaii traffic fatalities.

STRATEGIES

LEGISLATION AND FUNDING

- Define aggressive driving and seek more stringent penalties and driving restrictions to deter and curb aggressive driving.
- Expand proof of financial responsibility requirement for persons convicted of reckless driving to provide stiffer penalties and deter reckless driving.
- Allow use of the boot to immobilize offenders' vehicles on the owner's property to eliminate the cost of impounding vehicles.
- Enact legislation enabling counties to implement a photo enforcement program.
- Enact legislation that earmarks traffic citation fines to the counties specifically for traffic enforcement.
- Continue to seek federal assistance to support anti-speeding enforcement programs.

EDUCATION AND COMMUNITY ACTION

- Research and apply educational best practices conducive to Hawaii.
- Develop educational programs to create awareness of aggressive driving, and related fines and penalties.
- Increase participation in and effectiveness of the Hawaii graduated driver's education program with greater emphasis on behavior and attitude issues.
- Continue the Shattered Dreams project that targets high-risk youths using a simulated DUI crash scene at high schools.

ENFORCEMENT

- Encourage police departments to establish aggressive driving as an enforcement priority.
- Support police departments when it comes to providing clear guidance on departmental priorities.

ENGINEERING

- Improve traffic flow by using Intelligent Transportation System technologies such as synchronization of lights to reduce stress and frustration on the road.
- Expand implementation of speed feedback signs and use data to determine placement.
- Evaluate existing speed limits statewide to address aggressive driving and assure that speed limits are appropriately established.
- Conduct road safety audits to identify the need for improvements such as traffic calming, rumble strips, etc.
- Install milled rumble strips at centerline and roadway shoulders to warn drivers when they are straying into opposing traffic lanes or off the road.

DATA NEEDS

- Use crash data to identify high-risk locations in order to direct resources in enforcement, education, and engineering.

COMBATING IMPAIRED DRIVING

The Challenge:

Lower the number of alcohol- and drug-related traffic crashes in Hawaii.

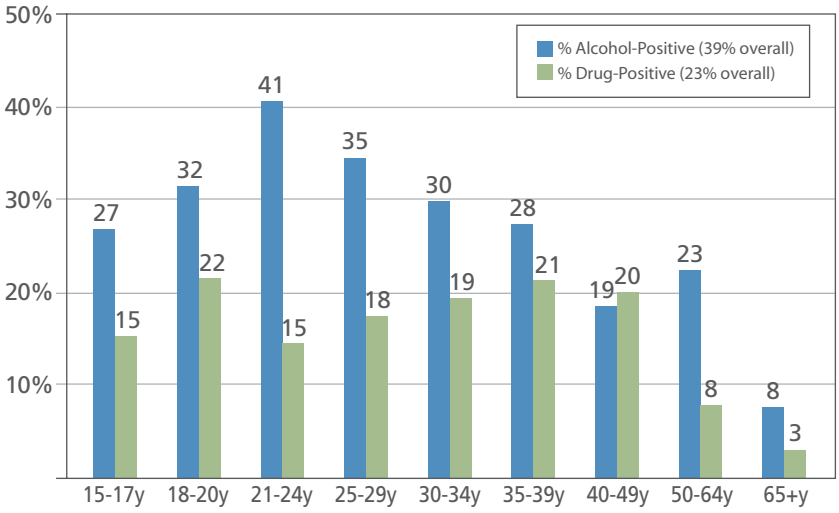
BACKGROUND

Hawaii ranks ninth in the nation in the percentage of traffic fatalities that involved impaired driving. Almost half (48 percent) of all fatal traffic crashes in Hawaii over the period 2001-2005 involved a driver who tested positive for alcohol or drugs, with a resulting average of 63 fatalities in Hawaii each year. Alcohol was involved in 36 percent of the crashes and 39 percent of the fatalities, while 22 percent of the crashes and 23 percent of the fatalities involved a drug-positive driver. Compared to other drivers, alcohol-positive drivers were younger, less likely to use protective devices, and had more severe injuries.

FIGURE 5

Drivers Involved in Fatal Traffic Crashes in Hawaii, 2001-2005

Proportion of Drivers Who Tested Positive for Alcohol or Drugs, by Age Group



Since 1971, Hawaii has passed major legislation to reduce impaired driving. Legislation established 21 as the minimum age for legal consumption of alcohol; established zero alcohol tolerance for drivers under 21; and established .08 blood alcohol content as the legal definition of impaired driving. Hawaii experienced moderate improvement between 2000 and 2002, with an average of 33 percent traffic fatalities involving alcohol impaired driving; however, over the next three years (2003-2005), the proportion of traffic fatalities related to alcohol-impaired driving rose to 42 percent; a 27 percent increase. Despite these measures, a high incident of alcohol related accidents continue to be experienced. The challenge persists.

STRATEGIES

LEGISLATION AND FUNDING

- Set up special courts within the Judiciary to provide a systematic and coordinated approach to prosecuting, sentencing, monitoring and treating DUI offenders.
- Establish Ignition Interlock option that would allow offenders to install an in-vehicle device that would block ignition when their blood alcohol level is over a preset limit.
- Improve Administrative Driver License Revocation Office documentation and communication.
- Tap into available funding sources for alcohol- and drug-abuse programs.
- Return at least 90 percent of surcharges assessed against DUI offenses to communities with comprehensive impaired-driving programs to support program funding.

EDUCATION AND COMMUNITY ACTION

- Expand mandatory server trainer program to cover all retail outlets statewide that sell liquor, including bars, restaurants, caterers and retailers.
- Develop programs and best practices to educate teen drivers, families and at-risk groups, that emphasize the practice of model behavior to deter drunk driving, speeding and non-seat belt use.
- Provide specialized training for police, prosecutors, and the Judiciary to keep up with latest trends and legal issues.
- Include focus on DUI issues in driver education programs and establish mandatory parent meetings for teen drivers.
- Provide training to help medical staff, emergency medical services technicians, teachers, and driver's education instructors recognize impairment.
- Promote proactive good driver insurance programs.
- Expand UMADD, the college-based chapters of Mothers Against Drunk Driving, to all college campuses in Hawaii in order to increase peer pressure aimed at curbing underage drinking, high-risk drinking, and impaired driving.
- Develop a Statewide DUI Task Force to increase focus on alcohol and drug strategies from implementation to evaluation.
- Support statewide court monitoring program to provide data on DUI trial results.
- Support expansion of alcohol-intervention program to all hospital emergency room cases in order to affect thousands of drivers who may be alcohol-dependent.

ENFORCEMENT

- Urge police departments to adopt a mandatory blood draw policy for serious vehicle crashes.
- Require county liquor commissions to expand compliance checks to include "off premise" locations such as small liquor stores and convenience outlets.
- Continue high-visibility sobriety checkpoints and media campaigns.

ENGINEERING

- Install milled rumble strips at centerline and roadway shoulders because drinking and driving can cause drowsiness, especially in rural areas where long distances are a factor.

DATA NEEDS

- Develop a standardized motor vehicle accident report form, coordinated data collection methods, and an accessible crash database.

PROTECTING VEHICLE OCCUPANTS

The Challenge:

Persuade every driver in Hawaii to use seat belts and those with small children to use child-safety seats.

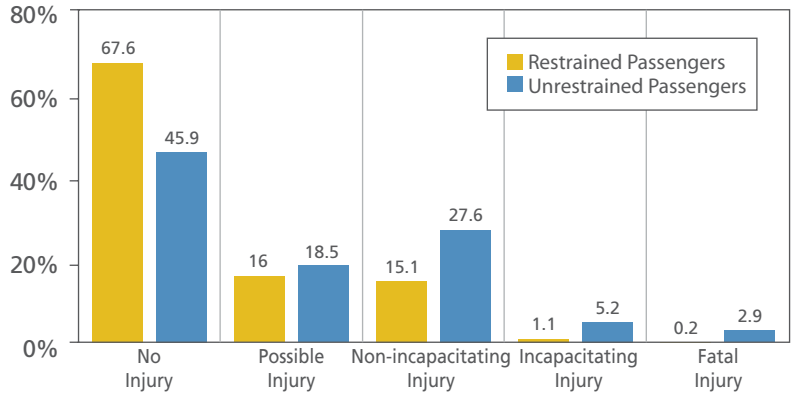
BACKGROUND

Wearing a seat belt is the single most effective way to save lives and reduce injuries. Seat belts can reduce fatalities by 45 percent and serious injuries by 69 percent. In 2005, the national seat belt use rate reached 82 percent. In 2007, Hawaii's seat-belt usage rate was the highest in the nation at 97.6 percent.

More than half (54 percent) or 184 of 340 vehicle occupants killed in traffic crashes in Hawaii from 2001 to 2005 were not wearing seat belts at the time of the crash. Restraint use was especially low among back-seat passengers in these crashes, as only 18 percent (6 of 34 victims) wore seat belts. Data from The Queen's Medical Center Trauma Registry also showed a protective effect of restraint use among severely injured occupants, as restrained occupants had significantly lower rates of traumatic brain injury, spinal cord injury, and overall mortality, compared to unrestrained occupants. The above calculations exclude 41 fatalities for whom restraint status was unknown.

FIGURE 6

Injury Status of Occupants Involved in Traffic Crashes in Hawaii, by Restraint Status, 2001-2005.



Hawaii's high rate of seat belt usage is due in part to the state's high-visibility Click It Or Ticket enforcement and media campaign. Despite Hawaii's exemplary usage rate, only 41.4 percent of Hawaii's 2006 traffic fatalities wore a seat belt, according to the Fatal Analysis Reporting System.

The National Center for Statistics and Research reports that child-safety seats in passenger vehicles can reduce fatal injury by 71 percent for infants less than one year old and by 54 percent for toddlers one to four. Hawaii's 2007 Child Safety Seat Observational Survey found that the child-safety seat use rate has declined to 70.38 percent from 79.86 percent in 2006.

STRATEGIES

LEGISLATION AND FUNDING

- Increase the current tax credit for child-safety seats or the number of credits for families with more than one child.
- Share revenue from fines with the counties to be used for enforcement, and create a special fund to continue occupant-protection programs.
- Offer incentives to police departments to continue their enforcement efforts.
- Provide immunity from liability for child-safety seat instructors and technicians.
- Enhance penalties including community service to reach the 5 percent of motorists who do not wear seat belts.
- Limit recovery fee/negligence from insurance companies for those who do not wear seat belts or use child-safety seats.
- Ban passengers from riding in the back of pick-up trucks.
- Fund annual occupant-protection surveys in cooperation with the four county police departments.
- Establish judicial funding or violator-class fees for purchase of child-safety seats.
- Obtain permanent funding to maintain and expand the number of child-safety seat inspection stations statewide.

EDUCATION AND COMMUNITY ACTION

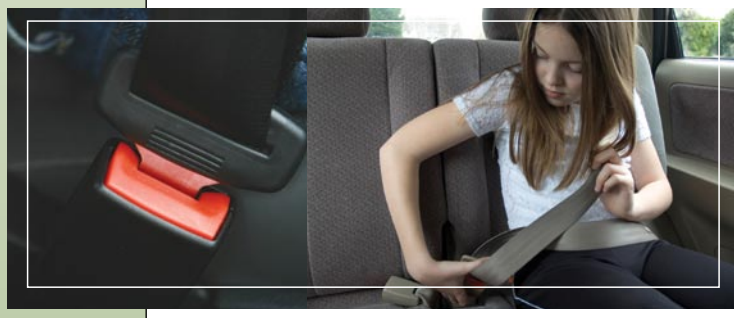
- Develop a comprehensive educational campaign to include updating materials such as the police department occupant-protection roll call video and driver education curriculum.
- Create point-of-entry signs to remind visitors about Hawaii's occupant-protection laws.
- Work closely with rental car agencies to distribute information about Hawaii's seat belt and child-safety seat laws.
- Work with high schools to develop public service messages for students and collateral materials for use in school newsletters and newspapers.
- Establish a statewide child-passenger safety coordinator and a traffic-safety coordinator position at each of the four county police departments.
- Seek national certification of child-passenger-safety teachers in the Judiciary to meet national standards to ensure that the most current child-passenger safety information is being taught.
- Survey offenders to determine reasons for non-use of child-safety seats.

Protecting Vehicle Occupants
continued

- Include occupant-protection training as a part of in-service training for all police officers and recruits.
- Add an occupant protection question for the Department of Health's Behavioral Risk Factor Surveillance System and the Department of Education's Youth Risk Behavior Survey and review data to assess changes.
- Develop a statewide occupant protection task force to meet regularly to ensure a comprehensive statewide program.
- Obtain support from the State Department of Health to make traffic-injury prevention a public-health priority.
- Enlist the state Department of Health to support traffic safety, especially child-passenger safety activities.
- Identify and overcome cultural and philosophical barriers to seat belt use.

ENFORCEMENT

- Step up nighttime enforcement of seat belt and child-safety laws as data shows that seat-belt use rates decline at night.



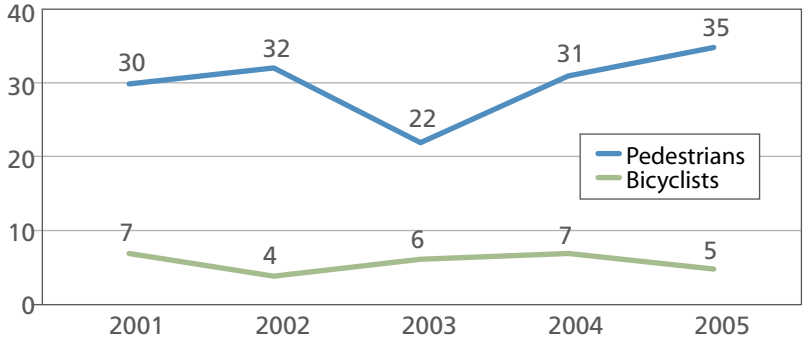
SAFEGUARDING PEDESTRIANS AND BICYCLISTS

BACKGROUND

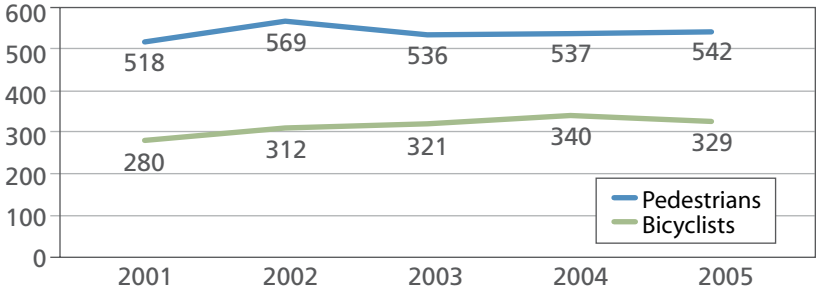
Walking and bicycling are modes of travel that are a fundamental part of the transportation system. In Hawaii, steps are being taken to elevate the safety of pedestrians and bicyclists to the same level as motorists. By doing this, we will also begin to acknowledge walking and biking as viable transportation options that also improve health and quality of life. Recent steps to address pedestrian safety include a law passed in 2005 requiring motorists to stop for pedestrians in crosswalks, and a statewide public awareness campaign that was undertaken to educate the public on the new law. Legislation passed in 2007 includes stricter penalties for crosswalk violators, substantial funding for crosswalk improvements and pedestrian education and enforcement, and funding earmarked for bikeways. Further improvements for pedestrian and bicycle safety and mobility will require a coordinated response and commitment between all levels of government, community and the private sector.

FIGURE 7

Annual Number of Pedestrians and Bicyclists Killed in Traffic Crashes in Hawaii, 2001-2005.



Annual Number of Pedestrians and Bicyclists involved in Non-Fatal Traffic Crashes in Hawaii, 2001-2005.



The Challenge:

Take steps to make Hawaii's roads and intersections safe for pedestrians and bicyclists.

Safeguarding Pedestrians and Bicyclists

continued

Hawaii had the fifth highest pedestrian fatality rate from traffic crashes in the United States over the 2001-2005 period, and by far the highest rate among senior-aged pedestrians (65 years and older). The 5-year rate for Hawaii senior-aged pedestrians (40.2 deaths/100,000 senior-aged residents) was nearly 3 times higher than that for the rest of the United States (14.1). A total of 150 pedestrians were killed in Hawaii over the 2001-2005 period, accounting for 22 percent of all traffic-related fatalities. In addition to the 30 pedestrians who are killed each year in the State, another 540 are involved in major traffic crashes. Senior pedestrians have the highest rates of fatal injuries, but the highest rates for non-fatal pedestrian crashes were computed for 5 to 19 year age range, with especially high rates among 10 to 14 year-olds.

Hawaii had the second highest average annual fatality rate for bicyclists (4.5 deaths/million residents) in the country from 2001-2005, nearly twice that for the rest of the States (2.4). There were 29 deaths from 2001-2005, representing 4 percent of all traffic-related fatalities. While there was no trend in the annual number of fatal injuries, the number of bicyclists involved in non-fatal crashes generally increased, from 280 in 2001 to 329 in 2005.

STRATEGIES

LEGISLATION AND FUNDING

- Revise and strengthen existing pedestrian and bicycle-related laws and support passage and implementation of new laws.
- Provide funding for law enforcement to meet the current shortage of personnel, including a shortage of more than 200 personnel at Honolulu Police Department.

ENFORCEMENT

- Increase enforcement of existing pedestrian and bicycle-related laws. An adequate level of enforcement is needed to reinforce compliance of existing laws and prevent injuries.
- Use red-light-running cameras to reduce manpower needed for enforcement.

DATA NEEDS

- Improve data collection systems to facilitate creation and dissemination of standardized data set to track bicycle and pedestrian activity, level of use, injuries and fatalities.

TRANSPORTATION AND LAND USE PLANNING

- Update zoning codes and street design standards to support best practices for pedestrian and bicycle facilities and safety.
- Identify and prioritize bike and pedestrian facilities requiring upgrades and improvements in accordance with Bike Plan Hawaii 2003 and AASHTO guidelines, and begin phased implementation.
- Develop a pedestrian plan that is commensurate with Bike Plan Hawaii 2003.
- Incorporate designs that accommodate walking and bicycling in land use planning and development policies and practices.
- Increase the visibility of bicyclist and pedestrians through the use of lighting, signage and advanced technology at intersections and crosswalks.

EDUCATION AND COMMUNITY ACTION

- Develop and support a campaign to educate students and adults about their rights and responsibilities as pedestrians, bicyclists and motorists.
- Develop a coordinated culturally sensitive media campaign to promote the "Drive with Aloha" spirit: promote safety and sharing the road with all users.
- Mobilize community groups to spread the safety message.
- Modify the driver's license manual and test to include a major section on safety and the motorists' responsibilities toward pedestrians and bicyclists.
- Support a multi-sector, multi-disciplinary coalition to advance bicycle and pedestrian safety in Hawaii.
- Provide infrastructure support at state and county levels to coordinate pedestrian/bicycle programs such as coordinator position to increase authority/pay and provide support staff for community outreach and create county coordinator positions.

ENSURING MOTORCYCLE AND MOPED SAFETY

The Challenge:

Reduce the number of motorcycle and moped crashes in Hawaii.

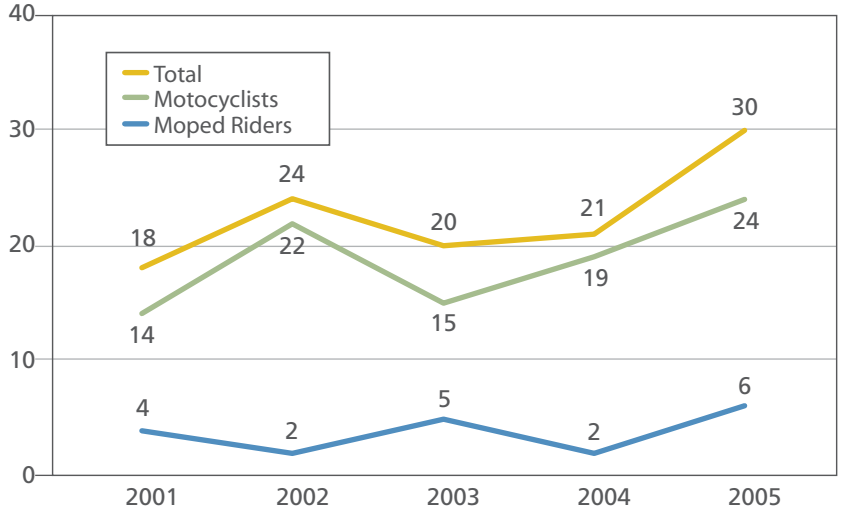
BACKGROUND

On average, 23 motorcycle and moped riders are killed in traffic crashes each year in Hawaii. The fatalities have been on the rise, with 18 fatalities in 2001 and 30 in 2005. The 30 fatalities in 2005 accounted for nearly 22 percent of all motor vehicle accident fatalities that year, the second highest percentage in the nation. Only about one-third (32 percent) of the victims were wearing a helmet at the time of the crash and only about half (52 percent) of the victims had a valid license. Findings from the Queen's Medical Center Trauma Registry show that helmeted riders have significantly lower incidence of traumatic brain injury (37 vs. 64 percent for non-helmeted riders), and lower overall fatality rates (2.8 vs. 5.5 percent). There are also significant increasing trends in alcohol involvement and speeding in fatal crashes, with 18 percent involvement for both factors in 2001, increasing to 43 and 53 percent respectively in 2005.

From 2001 to 2005, there were on average, 718 non-fatal motorcycle and moped crashes a year in Hawaii. This statistic has also been on the rise, with 691 crashes in 2001 and 743 in 2005. Data suggest that this increasing trend is strongly related to the growing popularity of motorcycles and mopeds, as well as the increased burden on facilities available for training.

FIGURE 8

Annual Number of Motorcyclists and Moped Riders Killed in Traffic Crashes in Hawaii, 2001-2005.



STRATEGIES

LEGISLATION AND FUNDING

- Increase penalties for excessive speeding.
- Enact a universal helmet law.
- Revise Hawaii Administrative Rules 19-123 (motorcycle rider education) to facilitate licensing for instructors and encourage instructors to apply.
- Increase penalties for high-risk riders (impaired, unlicensed, speeding), as they are involved in a disproportionately high number of crashes and fatalities.
- Provide increased funding for motorcycle and moped safety programs.
- Identify new technology that can detect motorcycle speeds more effectively.

EDUCATION AND COMMUNITY ACTION

- Develop public information programs to encourage sharing of the road and how to drive safely around motorcycles and mopeds.
- Encourage inexperienced riders to participate in training before going out on the roadways.
- Create a motorcycle and moped safety clearinghouse Web site to increase access to information and spread awareness.

ENGINEERING

- Plan, design, and maintain roadways with motorcycle and moped safety in mind.

DATA NEEDS

- Improve data for motorcycle-specific crashes in order to identify key areas for prioritizing resources.

BUILDING SAFER ROADWAYS BY DESIGN

The Challenge:

Employ design and engineering technology to help reduce traffic fatalities in Hawaii.

BACKGROUND

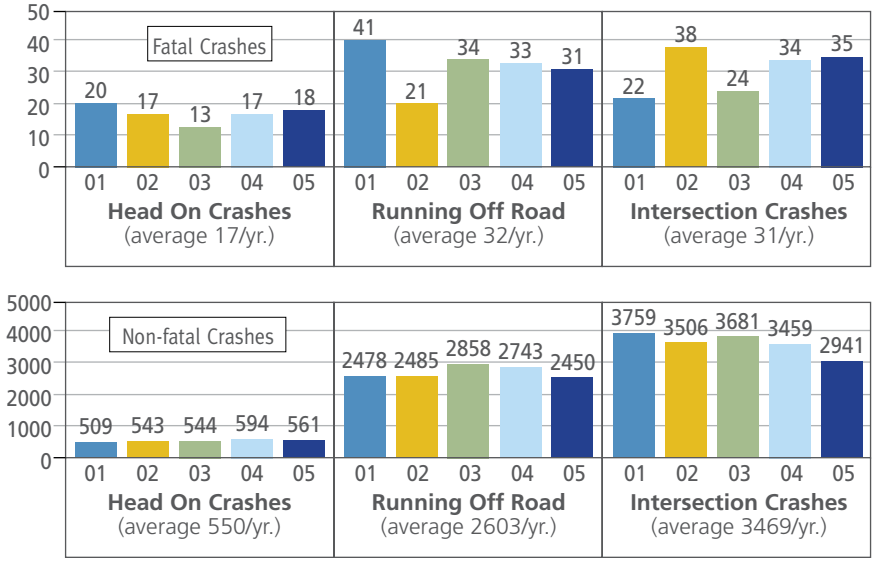
Although Hawaii is blessed with favorable year-round weather conditions and a good roadway system, there is a need to plan and build facilities designed to reduce traffic fatalities and injuries in our State.

Three types of traffic incidents are quantified in State data: head-on collisions, running off the road, and crashes at intersections. Head-on collisions comprised 26 percent of all fatal vehicle crashes in the State (an average of 17 per year), and 12 percent of all non-fatal crashes (550 per year). About two-thirds (65 percent) of the fatal head-on collisions were on rural roads. There were an average 32 fatal crashes from running off the road each year (49 percent of all vehicle crashes), and 2,600 non-fatal crashes (26 percent). Most (66 percent) of the run off the road fatal crashes were on rural roads. There was a decreasing trend in the number of non-fatal crashes from 3,750 in 2001 to 2,941 in 2005. Crashes at intersections comprised about one-quarter (25 percent) of all fatal and one-third (32 percent) of non-fatal crashes in Hawaii (30 and 3,470 crashes per year, respectively). There was a decreasing trend in the number of non-fatal crashes from 3,750 in 2001 to 2,941 in 2005.

Substance use, speeding, and failure to obey traffic signs and signals were all prevalent factors for the fatal vehicle crashes.

FIGURE 9

Annual Number of Fatal and Non-Fatal Crashes in Hawaii, by Type of Crash, 2001-2005.



STRATEGIES

ENGINEERING

- Install milled rumble strips at centerline and roadway shoulders to alert inattentive and drowsy drivers that are straying into opposing traffic lanes or off the road.
- Implement a pavement marking management program that will assure more timely replacement of worn and faded pavement markings.
- Implement a statewide sign management program that will replace weatherworn and damaged signs.
- Install signs with bigger typefaces to make it easier for older drivers to see and respond.
- Improve or install roadway lighting at locations with a history of nighttime crashes.
- Install delineators where the roadway alignment is confusing or unexpected.
- Reduce the possibility of hitting an object or overturning by designing safer slopes and ditches and removing or relocating objects in critical locations; add guardrails where needed.
- Install medians and other physical barriers to reduce head-on or crossover collisions.
- Implement a program for the timely repair of damaged safety fixtures such as damaged guardrails and light poles.
- Develop a streamlined process to accelerate delivery of local road projects.
- Incorporate designs that reduce conflicts such as synchronized traffic signals, traffic calming, round abouts, separate left turn signals and turn pockets.
- Conduct Road Safety Audits or Assessments on roadway projects to identify additional safety improvements.
- Continue to improve work zone safety through public education, good signage, and off-peak construction.

ENFORCEMENT

- Consult with police during project development and design safe locations to enforce traffic laws.

TRANSPORTATION AND LAND USE

- Pursue on a priority basis, projects identified in the Highway Safety Improvement Program for locations with known histories and incidents of crashes.
- Adopt rights-of-way maintenance and management policies that maintain clear zones as designed.
- Develop a coordinated transportation master plan that emphasizes safety, accommodates all users, and ensures adequate rights-of-way to support future growth.
- Develop a process to quickly resolve jurisdictional issues, as safety improvements cannot be undertaken where the road ownership is in limbo.

IMPROVING DATA AND SAFETY MANGEMENT SYSTEMS

The Challenge:

Develop and implement a comprehensive SMS that "gives decision makers and those who manage and maintain local roadways the tools to systematically identify, prioritize, correct, and evaluate the performance of their transportation safety investments."

(See National Cooperative Highway Research Program Report 501)

BACKGROUND

Improving traffic safety data and developing a comprehensive and effective Safety Management System (SMS) is a high priority and is an overarching and essential strategy to reduce serious and fatal traffic crashes in Hawaii over the next five years.

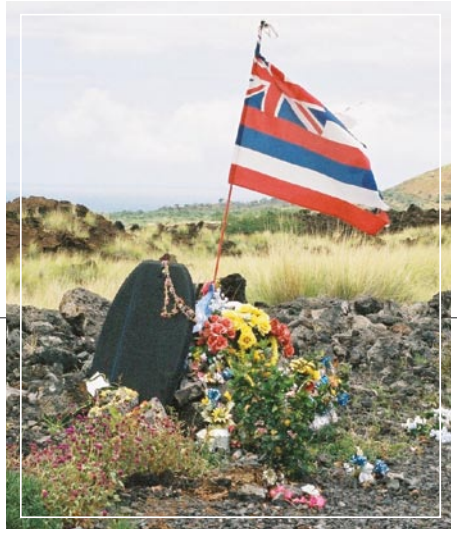
An integrated SMS is "a coordinated, comprehensive management approach to integrating engineering, education, enforcement, and emergency service efforts … to more effectively address major crash problems and achieve a greater reduction of overall injuries and deaths." (See National Cooperative Highway Research Program Report 501)

Each of the other six emphasis areas included improved data and information sharing as key strategies.

Accurate and timely data, information and an SMS are the essential tools to accomplish the required coordinated and comprehensive approach to integrating the work of Hawaii's transportation safety partners. Achieving the goal of saving lives and reducing traffic deaths and serious collisions will require significant improvements in data, information and safety management systems so that these systems are more efficient and traffic safety data becomes more accessible, timely, accurate and complete.

There is growing evidence from the Transportation Research Board, other states and countries that investment in improving both traffic safety data and safety management systems help to reduce serious collisions and associated high cost both human and financial, paid by government, businesses and citizens.

STRATEGIES



EMPHASIS AREA-RELATED

- Use crash data sources to identify high-risk locations in order to improve effective allocation of resources in enforcement, education and engineering to reduce crashes, injuries and deaths.
- Develop a standardized motor vehicle accident form, coordinated data collection methods, and an accessible crash database that can provide real time input and update of traffic incident data.
- Employ wireless communication and GPS technology to facilitate expeditious reporting and information input.
- Establish leadership towards long-term commitment to improve data and management systems and understand the risks of failure to improve and the benefits of effective information and management systems.
- Improve data and information to track progress in each of the other emphasis areas including: bicycle and pedestrian activity, impaired driving, aggressive driving, motorcycle & moped, specific crashes.
- Improve the data collection systems to create and disseminate to stakeholders a standardized data set for tracking bicycle and pedestrian activity, level of use, safety, injuries, and fatalities.

ORGANIZATIONAL

Improve traffic safety data to be more timely, accessible, integrated, complete and useable:

- Identify organizations and leaders responsible for improvement of traffic safety data and information.
- Conduct an inventory of existing data bases and assess existing data bases, using national standards and guidelines.
- Survey traffic safety partners to determine their data and information needs.
- Identify specific gaps and prioritize efforts to correct such deficiencies.
- Strengthen the charter of Traffic Records Coordinating Committee (TRCC).

Improving Data and Safety Management Systems

continued

- Establish executive level TRCC to provide oversight support, resources, and direction to all ongoing traffic record activities within Hawaii.
- Identify and reduce the barriers to implementing the Traffic Records Assessment 2006 recommendations.
- Improve linking and integration of data.
- Improve data quality assurance processes and reduce redundant entry.
- Improve training for data collection, entry, and quality assurance.

Improve the process to turn data into useful information:

- Improve data analysis and display capacity.
- Improve existing processes to turn data into useful information for law enforcement and other safety partners.

Improve Integrated Safety Management Systems:

- Establish an organization in charge of integrating all elements of a safety management system.
- Conduct an inventory of existing structures and processes for information flow and decision making by safety partners. Assess the opportunities to improve, based on national guidelines and national assessment tools.
- Review the current culture of collaboration for traffic safety at key partnering organizations including state Department of Transportation, county police departments and motor vehicle departments.
- Resolve liability issues that reduce access to critical information needed for timely decision-making by Department of Transportation and non-DOT safety partners.
- Develop a process to quickly resolve road jurisdictional issues.

Obtain funding needed to improve data, information flow and develop an effective safety management system.

MOVING FORWARD WITH A STRATEGIC HIGHWAY SAFETY PLAN

This plan is intended to provide overall guidance and direction to the many public agencies and community organizations that are concerned with highway safety.

The more than 100 strategies outlined here are wide-ranging and call for action on the state and county levels and on the part of community groups involved in traffic-safety programs and initiatives. Making Hawaii's highways safer and reducing traffic-related deaths and injuries over the next five years will require a coordinated and sustained effort.

The voluntary Core Committee will continue to act as a clearinghouse related to the plan, disseminating information to decision-makers at all levels and overseeing implementation, monitoring and evaluation.

Champions

The Core Committee has identified Champions who will serve as contacts with high-level leadership within the state and its four counties. The Core Committee will invite the Champions to continue discussion of the seven emphasis areas and update the Governor, the county mayors, police chiefs, committee chairs of the State House and State Senate Transportation and Health Committees, Hawaii Congressional representatives and others.

Making Hawaii's highways safer and reducing traffic-related deaths and injuries over the next five years will require a coordinated and sustained effort.

Moving Forward with a Strategic Highway Safety Plan

continued

Shared Responsibility

The Core Committee encourages all stakeholders to establish a process to include appropriate short-, medium-, and long-term safety-related actions or interventions and adequate funding in their regular work plans and budgets to effectively address agreed-upon strategies that pertain to them. The effort will also be aimed at incorporating a safety consideration in everything related to highway transportation. To help monitor the progress toward meeting each target, program participants will be tasked to establish relevant measures of performance.

In addition, the Core Committee will take the lead to expand existing committees (i.e., Walk Wise Hawaii, Traffic Records Coordinating Committee, Motorcycle Safety Task Force, etc.) or organize new committees to implement the strategies listed in this plan.

Monitoring

The ultimate purpose of the plan is to reduce over time, deaths, injuries and property damage associated with highway crashes. In addition to monitoring the overall implementation process, the Core Committee will establish a set of milestones to monitor individual strategies within each of the seven emphasis areas. The Core Committee will track progress and publicize accomplishments to give stakeholders and the community at large a sense of the overall effectiveness of the program. To help monitor and capture the progress made toward meeting each target, the participating entities will establish measures of performance relevant to each of their actions and provide this information to the Core Committee.

Evaluation

The Core Committee will continue to meet quarterly during the next five years and issue an annual progress report. The Committee will also meet annually with the Champions to discuss progress of the plan and task them to update the Governor.

ACKNOWLEDGMENTS

The SHSP Core Committee would like to thank all of the individuals who contributed to the development of Hawaii Strategic Highway Safety Plan. The participants, as well as many emphasis area workgroup members, contributed their time and knowledge to assist with developing strategies towards achieving our goal.

The Core Committee would especially like to thank Dan Galanis, Injury Epidemiologist at the Hawaii Department of Health, for providing data support to each of the emphasis area work groups and the data write-up for the SHSP; and Liz Fischer, Transportation Planner at the Federal Highway Administration for facilitating the overall planning process.

Our sincerest gratitude is extended to all individuals, agencies, companies and organizations listed below as well as to the many other supporters of traffic safety and injury prevention.

CHAMPIONS:

Brennon Morioka
Deputy Director, State of Hawaii Department of Transportation

Linda Rosen
Chief, Emergency Medical Services and Injury Prevention System, State of Hawaii Department of Health

Bryan Wauke
Assistant Chief, Honolulu Police Department

Sharon Vitousek
North Hawaii Outcomes Project

CORE COMMITTEE:

State of Hawaii Department of Transportation (HDOT)
Gordon Hong, Co-Chair
Sean Hiraoka, Co-Chair
Lee Nagano
Jan Higaki
Lianne Yamamoto
Jill Yamanouchi
Dean Nakagawa

State of Hawaii Department of Health (DOH)
Eric Tash
Robin Argue
John Kaizuka
Therese Argoud

Federal Highway Administration (FHWA)
Elizabeth Fischer, Facilitator
Wayne Kaneshiro

Federal Motor Carriers Safety Administration (FMCSA)
Sharon Cravalho

North Hawaii Outcomes Project (NHOP)
Sharon Vitousek

American Traffic Safety Services Association (ATSSA)
Albert Kanno

American Medical Response (AMR)
Andy Ancheta

Maui Police Department (MPD)
Capt. Charles Hirata

Honolulu Police Department (HPD)
Sgt. Robert Lung

Honolulu Department of Transportation Services (DTS)
Chris Sayers

Hawaii County Prosecutors
Mitchell Roth

Oahu Metropolitan Planning Organization (OMPO)
Shevaun Low
Gordon Lum

Hawaii Local Technical Assistance Program (LTAP)
C.S. Papacostas
Juli Kobayashi
Gail Ikeda

Acknowledgments

continued

DATA COMMITTEE:

Dan Galanis, DOH
Scott Haneberg, HDOT

EMPHASIS AREA WORKGROUPS:

EA #1 – Aggressive Driving
CHAIR: Capt. Charles Hirata, MPD
FACILITATOR: Jan Higaki, HDOT
RECORDER: Shevaun Low, OMPO

Hamid Bahadori, AAA Hawaii
Lilian Beaufrere, Hawaii Traffic Safety Council
Chief Patricia Dukes, EMS
Sgt. Christopher Gali, HCPD
Barbara Hale, Hawaii County Council
John Henry, Maui Traffic Safety Council
Sean Hiraoka, HDOT
Gordon Hong, HDOT
Ululani Kalua, Maui Traffic Safety Council
Sid Lee
Shaunda Liu, Hawaii County Prosecutors
Jo Manea
Councilwoman Emily Naeole, Hawaii County Council
Lt. Mark Scribner, KPD
Faith Sereno-Rex, SMS Consulting
Lt. Gordon Shiraishi, HPD
Rich Stacey, Honolulu Prosecutor's Office
Ronald Thiel, Hawaii County DPW
Richard Velazquez, AAA Hawaii
Myra Williams, HMSA
Su Yates, KIPC

EA #2 – Impaired Driving
CHAIR: Gordon Hong, HDOT
FACILITATOR: Jodi Chew, FHWA
RECORDER: Shevaun Low, OMPO

Jimmy Baros, EMS
Tim Dayton, GEICO
Anita DiMauro, GHSC
Deborah Goebert, UH
Sean Hiraoka, HDOT
Les Kiyabu, Judiciary
Arkie Koehl, MADD
Shaunda Liu, Hawaii County Prosecutors
Richard McDowell, American College of Emergency Physicians Hawaii
Carol McNamee, MADD
Jan Meeker, DOE
Jackie Murai, HCPD
Sgt. Ryan Nishibun, HPD
Jan Pakele, Big Island Liquor Control
Mitch Roth, Hawaii County Prosecutors
Ronald Sakata, Judiciary
Renee Sonobe-Hong, Honolulu Prosecutor's office
Sgt. Dexter Veriato, HCPD
Keith Yamamoto, DOH
Lianne Yamamoto, HDOT
Jan Yokoyama, DOH Hawaii

EA #3 – Occupant Protection
CHAIR: Lee Nagano, HDOT
FACILITATOR: John Kaizuka, DOH Hawaii
RECORDERS: Lianne Yamamoto, HDOT
and Cherise Ishida, HDOT

Carolyn Fujioka, State Farm Insurance
Capt. Charles Hirata, MPD
Gordon Hong, HDOT
Carrie Kuwada-Phipps, DOH Hawaii
Susan LaFontaine, Kapiolani Medical Center
Marlene Lee, DOH
Larry Oshiro, HDOT
Lt. Mark Scribner, KPD
Marie Weite, First Insurance
Neil Yoshioka, Hawaii County Fire Department

EA #4 – Pedestrian and Bicycle Safety
CHAIR: Therese Argoud, DOH
FACILITATOR: Mitch Roth, Hawaii County Prosecutors
RECORDERS: Chris Sayers, DTS
and Jill Yamanouchi, HDOT

Robin Argue, DOH
Gladys Baisa, Maui County Council
Gary Batcheller, DCAB
Patricia Blum, Eye of the Pacific Guide Dogs
Jackie McCarter-Boland, AARP
Karl Bossert, Maui Land & Pine
Laureen Brennan, OMPO
Tom Brown, County of Hawaii Mass Transit
Walter Enomoto, Maui Bicycling Alliance
Douglas Gilman, Department of Community Services, Elderly Affairs
Ben Gorospe, HDOT
Sean Hiraoka, HDOT
Gordon Hong, HDOT
Sally Jones, Queen's Medical Center
Wayne Kaneshiro, FHWA
Shirley Kidani, Executive Office on Aging

mahalo

Bryan Kimura, HDOT
Annette Mente, DOH
Richard Merschdorf, GHSC
Ana Minamishin, DTS
Brennon Morioka, HDOT
James Moriyasu, Maui Traffic Safety Council
Dean Nakagawa, HDOT
Thomas Noyes, Ke Ala Hele Makalae
Charlene Ota, Hawaii Centers for Independent Living
Alan Parker, Hawaii County Office of Aging
Pete Pascua, ITE
Diane Peters-Nguyen
Ann Peterson, PATH
Judge Frederick Rohlfing (Ret.)
Susan Sakai, Belt Collins
Bob Schratz, Hawaii Cycling Club
Kristi Schulenberg, Hawaii Bicycle League
John Schultz, Navy Region Hawaii
Brandon Stone, HPD
Kealoha Takahashi, Kauai Agency on Elderly Affairs
Ken Tatsuguchi, HDOT
Ronald Thiel, Hawaii County DPW
Thomas Thomas, Maui Traffic Safety Council
John Tomoso, Maui County Office of Aging
Patricia Tompkins, Department of Community Services, Elderly Affairs
Myra Williams, HMSA
Sgt. Jerry Wojcik, HPD

EA #5 – Motorcycle and Moped Safety
CHAIR: Sean Hiraoka, HDOT
FACILITATOR: Richelle Takara, FHWA
RECORDER: Matt Osato, HDOT

Kay Baker, DOH
Sgt. Nick Cambra, HPD
Mario Diprete, Marine Corps Base Hawaii
Gordon Hong, HDOT
Rodd Johnson, Navy Region Hawaii
Elzy Kaina, Rehab Hospital of the Pacific
Alexander Kaonohi, Jr., HDOT
Marjorie Kazama, HDOT
Alan Miyamura, Honolulu County Driver's Licensing
Maggie Samson, Rehab Hospital of the Pacific

EA #6 – Facility Design
CHAIR: Wayne Kaneshiro, FHWA
FACILITATOR: Vince Mammano, FHWA
RECORDERS: Liz Fischer, FHWA; Richelle Takara, FHWA; and Eric Worrell, FHWA

Ben Bauer, GP Road Solutions
Marvin Char, DDC
James Decker, Swinerton Builders
Melissa Fleming, Hawaii County Council
Sean Hiraoka, HDOT
Gordon Hong, HDOT
Ben Ishii, Hawaii County DPW
Lt. Darren Izumo, HPD
Melvin Kaku, DTS
Albert Kanno, ATSSA Hawaii
Karl Kunishige, HDOT
Shevaun Low, OMPO
Dean Nakagawa, HDOT
Gareth Sakakida, Hawaii Transportation Association
Alvin Takeshita, HDOT
David Tanoue, DPP
Ken Tatsuguchi, HDOT
Ken Teshima, Kauai County DPW
Ronald Thiel, Hawaii County DPW
Alvin Tomita, Honolulu Fire Department
Richard Torres, DTS
Ronald Tsuzuki, HDOT
Christine Yamasaki, HDOT
Cary Yamashita, Maui County DPW

EA #7 – Data and Safety Management Systems
Chair: Sharon Vitousek, NHOP
Facilitator: Robin Argue, DOH
Recorder: Gayle Kawell, FMCSA
Kay Baker, DOH
Laureen Brennan, OMPO
John Cater, Judiciary
Sharon Cravalho, FMCSA
Maj. Susan Dowsett, HPD
Cynthia Drake, HDOT
Dan Galanis, DOH
Jenny Gong, DOH
Don Hamada, ITE
Scott Haneberg, HDOT
Jan Higaki, HDOT
Sean Hiraoka, HDOT
Gordon Hong, HDOT
Iris Murayama, Judiciary
Naomi O'Dell, HCPD
C.S. Papacostas, LTAP
Goro Sulijoadikusumo, HDOT
Alvin Takeshita, HDOT
Eric Tash, DOH
Paul Won, ITE

State of Hawaii
Department of Transportation
Safe Communities Section
Aliiaimoku Building
869 Punchbowl Street, Room 405
Honolulu, Hawaii 96813

Ph: 808.587.6302
Fax: 808.587.6303

www.state.hi.us/dot